REMARKS

This Amendment is responsive to the Office Action mailed on January 12, 2006. Claims 40, 41, 43, 47, 48, 50, 59-61, 63-67, 73 are amended. Claims 79 and 80 are new. Claims 40-80 are pending.

As a preliminary matter, Applicants would like to thank the Examiner for the courteous and productive telephone interviews held on April 10, 2006 and April 11, 2006, the details of which are provided below.

Claims 50-51, 57, 61-62, 64-65 and 67 are objected to because of informalities in the claim language. In particular, the Examiner indicates that these claims lack antecedent basis for "the detector line." The claims are amended herein to overcome the Examiner's objection, withdrawal of which is respectfully requested.

Claims 40, 42-44, 46, 49-51, 53-57, 67-71, and 73-76 are rejected under 35 U.S.C. § 102(b) as being anticipated by Saito (US 6,243,018).

Claims 40-43, 47-48, 50, 51, 58-62, 67-69, and 78 are rejected under 35 U.S.C. § 102(e) as being anticipated by Maeckel (US 2005/0128661).

Claims 45, 52, and 63-66 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Maeckel in view of Pope (US 5,541,803).

Claims 72 and 77 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Saito in view of Born (US 6,625,880).

Applicants respectfully traverse these rejections in view of the amended claims and the following comments.

Discussion of April 10, 2006 and April 11, 2006 Telephone Interviews with Examiner

On April 10, 2006 Applicants' undersigned counsel telephoned the Examiner to discuss whether the citation of published U.S. patent application no. 2005/0128661 to Maeckel, et al. was appropriate under 35 U.S.C. § 102(e). Applicants' counsel indicated that the citation of Maeckel under 35 U.S.C. § 102(e) was not proper as Maeckel was not entitled to the filing date of the corresponding PCT application since the corresponding PCT application was not published in the English language. To qualify as prior art under 35 U.S.C.

§ 102(e) with an effective date of a corresponding PCT application, the PCT application must be published in English. Applicants' counsel pointed out to the Examiner that corresponding PCT application for Maeckel was published in German, and therefore did not meet the requirements of 35 U.S.C. 102(e) (see, e.g., MPEP § 706.02(f) and examples which follow). The Examiner indicated that she would review this matter with her supervisor before agreeing to withdraw the rejections in view of Maeckel. On April 11, 2006, the Examiner telephoned Applicants' undersigned counsel to indicate that she had reviewed this matter with her supervisor and that she agreed to withdraw Maeckel as a prior art reference under 35 U.S.C. § 102(e) as the corresponding PCT application was not published in English. The Examiner also indicated that Maeckel did not otherwise qualify as prior art to the present application. The Examiner indicated that the rejections set forth in the Office Action with regard to Maeckel would be withdrawn.

Accordingly, the rejections in view of Maeckel are not addressed herein, as the Examiner has agreed to withdraw such rejections.

Discussion of Amended Claims

Independent claim 40 is amended to specify that the detector element has at least one of an optical property and an electrical property, and that changes of the at least one optical and electrical properties are detectable by detecting means. Further, the word "behavior" in claim 40 is changed to "properties." Additional clarifying amendments have also been made to claim 40.

Claims 41, 43, 47, 48, 61, 63-66, and 73 are amended to change the word "behavior" to "property" to conform to the changes made to claim 40.

Claims 50 and 67 are amended to depend from claim 43, in order to provide proper antecedent basis for the limitation "detector line" and to overcome the Examiner's objection thereto.

Claims 59 and 60 are amended into independent form.

New claim 79 is based on amended claim 40, and refers to a detector line having an electrical property.

New claim 80 is based on amended claim 40, and refers to a detector line having an optical property.

Discussion of Saito

Claims 40, 42-44, 46, 49-51, 53-57, 67-71, and 73-76 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Saito. This rejection is respectfully traversed. An anticipation rejection requires that each and every element of the claimed invention as set forth in the claim be provided in the cited reference. See *Akamai Technologies Inc. v. Cable & Wireless Internet Services Inc.*, 68 USPQ2d 1186 (CA FC 2003), and cases cited therein. As discussed in detail below, Saito does not meet the requirements for an anticipation rejection.

Saito discloses an apparatus for multiplexing between on-board units in a vehicle which are connected by a wiring harness. The wiring harness has electric conductors of which the outer peripheral portion are covered with a first insulating layer, an electric conductivity layer which covers the electric conductors, a second layer insulating the peripheral portion of the electric layer which covers the conductivity layer, means for applying an electric potential to the electric conductivity layer, and means for monitoring the electric potential of the electric conductivity layer (Abstract).

In Saito, the means for monitoring the electric potential of the electric conductivity layer detects the presence or absence of a short-circuit (Col. 3, lines 43-44).

In Saito, in order to detect the presence or absence of a short-circuit, the detecting means must have an electric line which, in order to generate a short-circuit, comes into contact with another line or with ground. Accordingly, the detection of a short-circuit in Saito means that the electric potential of the detecting line is detected because the electric potential of the detecting line is changed if there is a short-circuit with one of the supply lines or ground (Col. 4, lines 1-4).

In contrast with Saito, Applicants' claimed invention does not provide for the detection of the potential of, for example, a detecting line, but rather the detection of an electrical property of the detecting line itself (or of the detector element). As an example, such an electrical property may be the electrical conductivity of the detecting line.

With Applicants' claimed invention, if, for example, the electrical conductivity of the

detecting line or detector element is irreversibly changed, there is no need to detect a short circuit with one of the supply lines or with ground as in Saito. With Applicants' claimed invention, the detecting line or detecting element stays isolated from the supply lines and from ground but changes its electrical property irreversibly, for example its electrical resistance, which in the worst case can be infinite.

In comparison, according to Saito, there does not need to be any change in any electrical property of the detecting line if a short circuit of one of the supply lines or ground occurs because the detecting line maintains its integrity and its electrical resistance unchanged.

In sum, the concept according to Applicants' claimed invention differs significantly from that disclosed in Saito, as Saito detects any contact of a detecting line with any other conductor which changes the potential of the detecting line, whereas with Applicants' claimed invention it is the electrical properties of the detecting line or detector element itself which are detected by a detecting means.

Further, in the case of an optical line, for example an optical fiber, the differences between Applicants' claimed invention and the disclosure of Saito are even more significant, as with an optical fiber it cannot be detected whether this fiber touches a supply line or ground, and thus the fiber will not change its potential. Thus, the concept disclosed in Saito is not realizable with an optical fiber.

With Applicants' claimed invention, it is possible to detect whether the optical fiber changes its optical properties, for example by changing its optical transmission.

Accordingly, Saito does not disclose or remotely suggest a detector element having at least one of an optical property and an electrical property, where changes in the at least one of the optical and electrical properties are detectable by detecting means and where the detector element is adapted in such a way that at least one of the electrical and optical properties are irreversibly changed when a local arc originating from the current-carrying inner conductor occurs, as set forth in Applicants' claim 1. Similar arguments apply equally to Applicants' independent claims 59, 60, 79 and 80.

As Saito does not disclose each and every element of the invention as claimed, the rejections under 35 U.S.C. § 102(b) are believed to be improper, and withdrawal of the

rejections is respectfully requested. See, *Akamai Technologies Inc., supra.*

Applicants respectfully submit that the present invention is not anticipated by and would not have been obvious to one skilled in the art in view of Saito, taken alone or in combination with any of the other prior art of record.

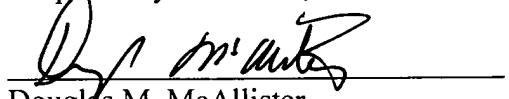
Further remarks regarding the asserted relationship between Applicant's claims and the prior art are not deemed necessary, in view of the foregoing discussion. Applicants' silence as to any of the Examiner's comments is not indicative of an acquiescence to the stated grounds of rejection.

Withdrawal of the rejections under 35 U.S.C. § 102(b), 35 U.S.C. § 102(e), and 35 U.S.C. § 103(a) is therefore respectfully requested.

Conclusion

The Examiner is respectfully requested to reconsider this application, allow each of the pending claims and to pass this application on to an early issue. If there are any remaining issues that need to be addressed in order to place this application into condition for allowance, the Examiner is requested to telephone Applicants' undersigned attorney.

Respectfully submitted,



Douglas M. McAllister
Attorney for Applicant(s)
Registration No. 37,886
Lipsitz & McAllister, LLC
755 Main Street
Monroe, CT 06468
(203) 459-0200

ATTORNEY DOCKET NO.: HOE-767
Date: April 12, 2006